

Roberto Angelo MOTTERLINI
Appl. No. 10/535,508
Atty. Ref.: 620-371
Amendment
April 1, 2008

AMENDMENTS TO THE CLAIMS:

Amend the claims as follows:

1. (Currently Amended) A method of treatment of an extracorporeal organ that is a donated transplantation organ and is outside the donor's body or isolated organ of a patient that is inside or attached to a patient's body but is isolated from the patient's blood supply, said method comprising contacting the extracorporeal organ or the isolated organ with a composition including a metal carbonyl compound or pharmaceutically acceptable salt thereof and at least one pharmaceutically acceptable carrier wherein the metal carbonyl or pharmaceutically acceptable salt thereof makes available carbon monoxide to limit post-ischaemic damage to said extracorporeal organ or said isolated organ.

Claim 2. (Canceled)

3. (Original) A method according to claim 1 wherein said metal carbonyl makes CO available by at least one of the following means:

- 1) CO derived by dissociation of the metal carbonyl is present in the composition in dissolved form;
- 2) on contact with a solvent the metal carbonyl releases CO;
- 3) on contact with a tissue, organ or cell the metal carbonyl releases CO;
- 4) on irradiation, the metal carbonyl releases CO.

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4. (Currently Amended) A method according to claim 1 wherein treatment is of said organ is extracorporeal organ.

5. (Currently Amended) A method according to claim 1 wherein treatment is of said isolated organ is inside or attached to the body but isolated from the blood supply.

6. (Previously Presented) A method according to claim 1 wherein the contacting step includes perfusing said organ with said composition.

7. (Previously Presented) A method according to claim 1 wherein the metal carbonyl is a compound of the formula $M(CO)_x A_y$ where x is at least one, y is at least one, M is a metal, the or each A is an atom or group bonded to M by an ionic, covalent or coordination bond but is not CO, and in the case where $y > 1$ each A may be the same or different, or a pharmaceutically acceptable salt of such a compound.

8. (Previously Presented) A method according to claim 7 wherein M is a transition metal.

9. (Previously Presented) A method according to claim 7, wherein A is selected from neutral or anionic ligands such as halide or derived from Lewis bases and having N, P, O, S or C as the coordinating atom.

10. (Currently Amended) A method according to claim 1 wherein the metal carbonyl compound has the formula

$M(CO)_x A_y B_z$ where

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M is Fe, Co or Ru,

x is at least one,

y is at least one,

z is zero or at least one,

each A is a ligand other than CO and is monodentate or polydentate with respect to M and is selected from the amino acids

alanine₁

arginine₁

asparagines₁

aspartic acid₁

cysteine₁

glutamic acid₁

glutamine₁

glycine₁

histidine₁

isoleucine₁

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leucine₁

lysine₁

methionine₁

phenylalanine₁

proline₁

serine₁

threonine₁

Tryptophan₁

Tyrosine₁

Valine₁

$[\text{O}(\text{CH}_2\text{COO})_2]^{2-}$ and

$[\text{NH}(\text{CH}_2\text{COO})_2]^{2-}$, and

B is optional and is a ligand other than CO.

Claims 11 - 15. (Cancelled)

16. (new) A method of treatment of an extracorporeal organ that is a donated transplantation organ and is outside the donor's body, said method comprising

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contacting the extracorporeal organ with a composition including a metal carbonyl compound or pharmaceutically acceptable salt thereof and at least one pharmaceutically acceptable carrier, at a temperature in the range of 2 to 10°C, wherein the metal carbonyl makes available carbon monoxide to limit post-ischaemic damage of said extracorporeal organ.

17. (new) A method according to claim 16 wherein said metal carbonyl makes CO available by at least one of the following means:

- 1) CO derived by dissociation of the metal carbonyl is present in the composition in dissolved form;
- 2) on contact with a solvent the metal carbonyl releases CO;
- 3) on contact with a tissue, organ or cell the metal carbonyl releases CO;
- 4) on irradiation, the metal carbonyl releases CO.

18. (new) A method according to claim 16 wherein the contacting step includes perfusing said organ with said composition.

19. (new) A method according to claim 16 wherein the metal carbonyl is a compound of the formula $M(CO)_x A_y$ where x is at least one, y is at least one, M is a metal, the or each A is an atom or group bonded to M by an ionic, covalent or

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coordination bond but is not CO, and in the case where $y > 1$ each A may be the same or different, or a pharmaceutically acceptable salt of such a compound.

20. (new) A method according to claim 19 wherein M is a transition metal.

21. (new) A method according to claim 19, wherein each A is separately selected from neutral or anionic ligands.

22. (new) A method of claim 21 wherein each A is separately a halide or is derived from a Lewis base and has N, P, O, S or C as the coordinating atom.

23. (new) A method according to claim 16 wherein the metal carbonyl compound has the formula

$M(CO)_x A_y B_z$ where

M is Fe, Co or Ru,

x is at least one,

y is at least one,

z is zero or at least one,

each A is a ligand other than CO and is monodentate or polydentate with respect to M and is alanine, arginine, asparagines, aspartic acid, cysteine, glutamic acid, glutamine, glycine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine,

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proline, serine, threonine, tryptophan, tyrosine, valine, $[\text{O}(\text{CH}_2\text{COO})_2]^{2-}$ or

$[\text{NH}(\text{CH}_2\text{COO})_2]^{2-}$, and

B is optional and is a ligand other than CO.